THE USE OF CHITIN-BASED DRESSING IN THE TREATMENT OF DEEP PARTIAL SKIN THICHNESS WOUNDS: ANIMAL STUDY

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ABSTRACT

In this study, chitin modified with acrylic acid (chitin-PAA) was applied as a wound dressing to evaluate its healing effectiveness. Guinea-pigs were inflicted with two mirror images of 1x1 cm^2 deep partial skin thickness incisions. The wounds were dressed with chitin-PAA and Cutinova® hydro, a commercial dressing, for a comparison and were inspected every 3 days for up to 18 days. The healing of excised wounds was assessed by measuring the change in wound areas. Histological examination of the wound and surroundings was also performed to reveal any interaction of tissue with the dressing. The wounds covered with chitin-PAA showed no signs of infection and healed completely within 15 days. A significant improvement in the wound healing was found for chitin PAA, especially at the initial stage of treatment before appearing of scabs. The results demonstrated that chitin-PAA was a good material for use as a dressing for wound healing.

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